REMARKS

Claims in the case are 1-8 and 12-17, upon entry of this amendment. Claim 1 has been amended, and Claims 14-17 has been added herein.

Basis for the amendments to B.1) and B.2) of Claim 1 is found at page 11, lines 4-10 of the specification. Basis, in Claim 1, for the recitation as to graft polymer (B) having an average particle diameter of 0.5 to 5 μm, is found at page 12, lines 1-3 of the specification. Basis for inclusion of the recitation, in Claim 1, as to graft polymer B) having a grafting yield of 2 to 40%, is found at page 11, lines 22-28 of the specification.

Basis for added Claim 14 is found at page 12, lines 1-3 of the specification. Basis for added Claim 15 is found at page 11, lines 4-10 of the specification. Basis for added Claims 16 and 17 is found at page 11, lines 22-28 of the specification.

Applicants acknowledge with appreciation the withdrawal of the previous rejection of Claims 1, 6 and 7 under 35 U.S.C. §112, second paragraph.

Applicants acknowledge with appreciation the withdrawal of the previous rejection of Claims 1-8 and 12 under 35 U.S.C. §103(a) over European Patent Application No. EP 0 728 811 (**Maruyama et al**) in view of United States Patent No. 5,194,477 (**Liu et al**).

Claims 1-8, 12 and 13 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Maruyama et al. In light of the amendments herein and the following remarks, this rejection is respectfully traversed.

Maruyama et al disclose a flame retardant thermoplastic resin composition that includes: an aromatic polycarbonate; a graft copolymer; optionally a copolymer prepared by copolymerizing an aromatic vinyl monomer and a monomer copolymerizable therewith; a phosphazene; and optionally polytetrafluorethylene. See the abstract; formulas (I) and (II) on page 4; and page 5, lines 5-9 of Maruyama et al.

The graft copolymer of Maruyama et al is disclosed as being prepared by processes, such as emulsion, suspension, solution or bulk polymerization (page 3, lines 43-45). The graft copolymer of Maruyama et al's examples was prepared by means of emulsion polymerization (page 5, line 55 through page 6, line 13).

Maruyama et al do not disclose, teach or suggest the particle size of the graft copolymer of their compositions. Maruyama et al disclose the weight average particle size diameter of the rubber component of their graft copolymer as being 0.10 to 1.50 μm. However, such disclosure by Maruyama et al neither reasonably reaches nor touches upon the average particle diameter of the graft polymer of Applicants' present claims, which is from 0.5 to 5 μm.

With regard to preparing the graft copolymer of their compositions, Maruyama et al do not disclose, teach or suggest any preference towards selecting the suspension, solution and/or bulk polymerization methods over the emulsion polymerization process. In fact, as pointed out above, the examples of Maruyama et al make use of a graft copolymer prepared by emulsion polymerization. Further, Maruyama et al do not disclose, teach or suggest that improved properties could be obtained from a flame retardant thermoplastic resin composition comprising a graft copolymer that is prepared by processes other than emulsion polymerization.

The graft copolymer (B) of the compositions of Applicants' present claims are prepared by a process selected **only from** bulk, solution or bulk/suspension polymerizations (i.e., to the exclusion of emulsion polymerization). The improved and unexpected results that are possessed by the thermoplastic molding compositions of Applicants' claims are demonstrated in the examples on pages 21-25 of the specification. The molding compositions in accordance with Applicants' present invention (i.e., Examples 1-4) include an ABS graft copolymer prepared by means of bulk polymerization, while the comparative composition of Example 5 includes an ABS graft copolymer prepared by means of emulsion polymerization.

The compositions in accordance with Applicants' present claims have improved physical properties, such as a favorable combination of flame resistance and mechanical properties. In addition, the compositions of Applicants' invention posses further advantages with regard to processability, in particular with regard to improved flow behavior (MVR), and a 20 % reduction in loss of mass during processing of the compositions. See the Table on page 24 of the specification. In summary, the thermoplastic molding composition of Applicants' present invention has: (i) flame resistance that is at least equivalent to; (ii) mechanical properties that are at least equivalent to; (iii) improved melt behavior; and (iv) a reduction in loss of

mass at 280°C, as determined by means of thermogravimetric analysis, relative to a comparative thermoplastic molding composition which includes, in place of graft polymer B), a graft polymer prepared by means of emulsion polymerization. See the Examples on pages 21-25 of the specification; particularly in the table on page 24 of the specification; and more particularly at page 24, line 7 through page 25, line 2 of the specification.

On page 2 of the Office Action of it is argued that the graft copolymer of Maruyama et al is the same as that of Applicants' graft polymer (B). Applicants respectfully disagree. Maruyama et al provide a general disclosure as to graft copolymers, and a more specific disclosure as to graft copolymers prepared by means of emulsion polymerization. However, Maruyama et al provide no disclosure, teaching or suggestion as to graft polymers prepared from a graft backbone having a glass transition of less than 10°C, and in which the graft polymer itself has a graft yield of 2 to 40% and an average particle diameter of 0.5 to 5 μm. Regarding the Examiner's position as to the glass transition temperature of the graft copolymers of Maruyama et al, Applicants respectfully submit that, Examiner's assumptions do not constitute the disclosure of prior art. See In re Rijckaert, 28 U.S.P.Q.2d 1955 (CAFC 1993) wherein the Court of Appeals, Federal Circuit stated:

> - In rejecting claims under 35 U.S.C. §103, the examiner bears the initial burden of presenting a *prima facie* case of obviousness ... "A *prima facie* case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art ... If the examiner fails to establish a *prima facie* case, the rejection is improper and will be overturned. Id. at 1956.
>
> - Rijckaert argues that the examiner has not established a prima facie case of obviousness and that the examiner's assumptions do not constitute the disclosure of prior art. We agree. Id. at 1956.

In light of the amendments herein and preceding comments, Applicants' claims are deemed to be nonobvious and patentable over Maruyama et al. Reconsideration and withdrawal of this rejection is respectfully requested.

Clams 1-8, 12 and 13 stand rejected under 35 U.S.C. §102(b) as being anticipated by Maruyama et al. This rejection is respectfully traversed with regard to the amendments herein and the following remarks.

As discussed previously herein, Maruyama et al do not disclose a thermoplastic molding composition that includes a graft polymer having a graft yield of 2 to 40% and an average particle diameter of 0.5 to 5 μm, and which is prepared from a grafting backbone having a glass transition temperature of less than 10°C. As such, the graft copolymer of Maruyama et al is not deemed to be the same as the graft polymer of Applicants' present claims. Further, and as discussed previously herein, regarding the Examiner's position as to the Maruyama et al's graft copolymers somehow embodying the glass transition temperature of the graft polymer of Applicants' present claims, Applicants respectfully submit that, Examiner's assumptions do not constitute the disclosure of prior art. See In re Rijckaert, 28 U.S.P.Q.2d 1955, 1956 (CAFC 1993).

Maruyama et al do not disclose preparing the graft copolymer of their composition by methods that are exclusive of emulsion polymerization. In addition, Maruyama et al do not disclose the combination of improved physical properties that are surprisingly obtained with the compositions of Applicants' present claims (which are demonstrated by the results of Applicants' Examples, as discussed previously herein). In particular, Maruyama et al do not disclose selecting the components of their composition such that it has a combination of: (i) flame resistance that is at least equivalent to; (ii) mechanical properties that are at least equivalent to; (iii) improved melt behavior; and (iv) a reduction in loss of mass at 280°C, as determined by means of thermogravimetric analysis, relative to a comparative thermoplastic molding composition which includes, in place of the graft polymer (prepared by means that are exclusive of emulsion polymerization), a graft polymer prepared by means of emulsion polymerization.

In light of the amendments herein and the preceding remarks, Applicants' claims are deemed to be unanticipated by and patentable over Maruyama et al. Reconsideration and withdrawal of this rejection is respectfully requested.

In light of the preceding amendments and remarks, Applicants' presently pending claims are deemed to define an invention that is unanticipated, unovbious and hence, patentable. Reconsideration of the rejections and allowance of all of the presently pending claims is respectfully requested.

Respectfully submitted,

By _____
James R. Franks
Agent for Applicants
Reg. No. 42,552

Bayer Corporation
100 Bayer Road
Pittsburgh, Pennsylvania 15205-9741
(412) 777-8339
FACSIMILE PHONE NUMBER:
(412) 777-8363

VERSIONS WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS: (Marked-Up)

The following are versions of the amended claims with markings to show changes made thereto in the present Amendment. As the claims already contain brackets, deletions are shown herein as strikethroughs (e.g., ~~strikethroughs~~), and additions are shown with underlining (e.g., underlining).

1. (Twice Amended, Marked Up) A thermoplastic moulding composition containing:

A) 40 to 99 parts by weight of at least one of aromatic polycarbonate and polyester carbonate;

B) 0.5 to 60 parts by weight of graft polymer produced by a process selected from the group consisting of bulk polymerisation, solution polymerisation and bulk/suspension polymerisation of

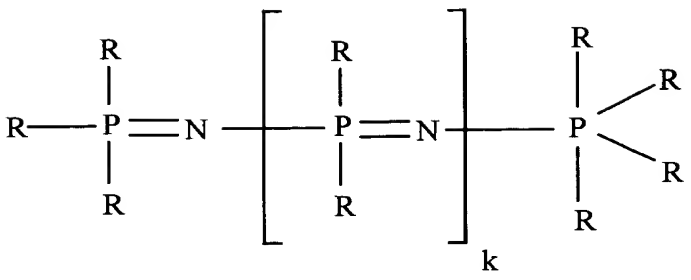
B.1) ~~50 to 99~~ 65 to 98 wt.% of one or more vinyl monomers, and

B.2) ~~50 to 1~~ 2 to 35 wt.% of one or more grafting backbones having a glass transition temperature of <10°C,

said graft polymer having an average particle diameter of 0.5 to 5 μm, and a grafting yield of 2 to 40%;

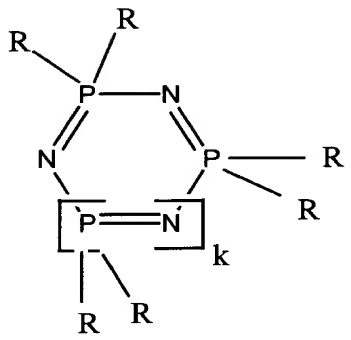
C) 0 to 45 parts by weight of at least one thermoplastic polymer selected from the group consisting of vinyl (co)polymers and polyalkylene terephthalates;

D) 0.1 to 50 parts by weight of at least one component selected from the group consisting of phosphazenes represented by the formulae,



(Ia)

and



(Ib)

in which

R is in each case identical or different and denotes at least one of amino, C_1 to C_6 alkyl, in each case optionally halogenated, C_1 to C_8 alkoxy, C_5 to C_6 cycloalkyl, C_6 to C_{20} aryl, C_6 to C_{20} aryloxy, C_7 to C_{12} aralkyl, in each case optionally substituted by at least one of alkyl, and halogen,

k denotes 0 or a number from 1 to 15; and

E) 0 to 5 parts by weight of fluorinated polyolefin.

14. (Added) The thermoplastic moulding composition of Claim 1 wherein graft polymer B) has an average particle diameter of 0.8 to 2.5 μm.

15. (Added) The thermoplastic moulding composition of Claim 1 wherein graft polymer B) is produced by polymerization of 75 to 97 wt. % of B.1), and 2 to 15 wt. % of B.2).

16. (Added) The thermoplastic moulding composition of Claim 1 wherein said graft copolymer B) has a grafting yield of 3 to 30%.

17. (Added) The thermoplastic moulding composition of Claim 1 wherein said graft copolymer B) has a grafting yield of 4 to 20%.